

Amendment After Final Rejection  
Serial No. 09/954,657

Docket No. DE000148

**IN THE CLAIMS:**

**Kindly replace the claims with the following full set of claims:**

1. (Currently amended) A dialog system (1) comprising processing units for
  - automatic speech recognition (3),
  - natural language understanding (4),
  - defining system outputs in dependence on information (7) derived from user inputs,
  - generating acoustic and/or visual system outputs (9, 10, 11, 12),
  - deriving user models (22, 25), from determined details about the style of speech of user inputs and/or details about interactions in dialogs between users and the dialog system (1), wherein the style of speech is determined based on factors selected from the group consisting of: the number of polite phrases used, address used, speech level, information density, vocabulary and use of foreign words, number of different words and classification of words of speech inputs with respect to rare occurrence; and
  - adaptation of contents and/or form of system outputs in dependence on the derived user models (22, 25).
2. (Current amended) A dialog system as claimed in claim 1, characterized in that wherein in addition to the input modality to use user inputs by means of speech, at least a further input modality is provided and in that the user models (22, 25) contain details about the respective use of the various input modalities by the user.
3. (Current amended) A dialog system as claimed in claim 1, characterized in that -wherein the user models (22, 25) contain estimates for the reliability of recognition results derived from user inputs.

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4. (Current amended) A dialog system as claimed in claim 3, characterized in that wherein in dependence on the estimates, system responses are generated which prompt the respective user to use such input modalities for which high estimate values were determined and/or which prevent the respective user from using input modalities for which low reliability values were determined.

5. (Current amended) A dialog system as claimed in one of the claims 1, characterized in that wherein fixed models of user stereotypes (22) are used for forming the user models.

6. (Current amended) A dialog system as claimed in one of the claims 1, characterized in that wherein user models (25) are used which are continuously updated based on inputs of the respective user.

7. (Currently amended) A method of operating a dialog system, in which processing units are used for

- automatic speech recognition (3),
- natural language understanding (4),
- defining system outputs in dependence on information (7) derived from user inputs,
- generating acoustic and/or visual system outputs (9, 10, 11, 12), and
- deriving user models (13), from

details about the style of speech of user inputs and/or indications about interactions in dialogs between users and the dialog system (1), wherein the style of speech is determined based on factors selected from the group consisting of: the number of polite phrases used, address used, speech level, information density, vocabulary and use of foreign words, number of different words and classification of words of speech inputs with respect to rare occurrence; and adapting contents and/or form of system outputs in dependence on the user models (22, 25).

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8. (Currently amended) A process for television-user dialog, comprising the steps of:  
receiving user speech input;  
processing the speech input using automatic speech recognition and natural language understanding; and  
defining at least one system output based on the speech input and a user model derived from details of the user style of speech inputs, wherein the style of speech is determined based on factors selected from the group consisting of: the number of polite phrases used, address used, speech levcl, information density, vocabulary and use of foreign words, number of different words and classification of words of speech inputs with respect to rare occurrence.

9. (Current amended) The process of claim 8, wherein the step of defining comprises the step of:

defining at least one system output bascd on the speech input and a user model which includes an experience level, wherein the system output is based on the experience level of the user model in that if the experience level is low, the system output is a first length, while if the experience level is high, the system output is a second length lesser than the first length.

10. (Current amended) The process of claim 8, wherein the step of defining comprises the step of:

defining at least one system output based on the speech input and a user model which includes a likely input modality for a current prompt, wherein the system output is based on the likely input modality.

11. (Current amended) The process of claim 8, whercin the step of defining comprises the step of:

defining at least one system output based on the speech input and a user model which includes a familiarity level, wherein the system output is based on the familiarity level.

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| 12. (Current amended) The process of claim 8, further comprising the steps of:  
| receiving a user face image; and  
| determining a degree of despair based on the user face image; wherein the  
| step of defining comprises the step of:  
| defining at least one system output based on the degree of despair.